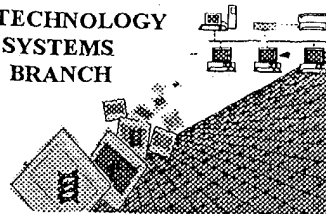


RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/665,460

Source: _____

Date Processed by STIC: 10/9/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/2003):
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/2003



OIPE

RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

3 <110> APPLICANT: Freyssinet, Georges
 4 Rang, Cecile
 5 Frutos, Roger
 7 <120> TITLE OF INVENTION: Pepsin-sensitive modified Bacillus thuringiensis
 insecticidal
 8 toxin
 10 <130> FILE REFERENCE: A35992-PCT-USA-A (072667.0191)
 OK> 12 <140> CURRENT APPLICATION NUMBER: US/10/665,460
 13 <141> CURRENT FILING DATE: 2003-09-19
 15 <150> PRIOR APPLICATION NUMBER: PCT/FR02/00772
 W--> 16 <151> PRIOR FILING DATE: March 4, 2002 2002-03-04 ← use this date format
 18 <150> PRIOR APPLICATION NUMBER: FR 01/03691
 W--> 19 <151> PRIOR FILING DATE: March 19, 2001 2001-03-19 ← Does Not Comply
 21 <160> NUMBER OF SEQ ID NOS: 160 Corrected Diskette Needed
 23 <170> SOFTWARE: PatentIn Ver. 2.1 see pp 1,3,5,7,9,11

ERRORED SEQUENCES

529 <210> SEQ ID NO: 4
 530 <211> LENGTH: 673
 531 <212> TYPE: PRT
 532 <213> ORGANISM: Artificial sequence
 W--> 533 <220> FEATURE: insert this mandatory numeric identifier whenever <221>, <222>, or <223>
 533 <223> OTHER INFORMATION: Artificial sequence description: Cry9Ca1 Leu-164 is shown
 OK> 535 <400> SEQUENCE: 4
 536 Met Asn Arg Asn Asn Gln Asn Glu Tyr Glu Ile Ile Asp Ala Pro His
 537 1 5 10 15
 539 Cys Gly Cys Pro Ser Asp Asp Asp Val Arg Tyr Pro Leu Ala Ser Asp
 540 20 25 30
 542 Pro Asn Ala Ala Leu Gln Asn Met Asn Tyr Lys Asp Tyr Leu Gln Met
 543 35 40 45
 545 Thr Asp Glu Asp Tyr Thr Asp Ser Tyr Ile Asn Pro Ser Leu Ser Ile
 546 50 55 60
 548 Ser Gly Arg Asp Ala Val Gln Thr Ala Leu Thr Val Val Gly Arg Ile
 549 65 70 75 80
 551 Leu Gly Ala Leu Gly Val Pro Phe Ser Gly Gln Ile Val Ser Phe Tyr
 552 85 90 95
 554 Gln Phe Leu Leu Asn Thr Leu Trp Pro Val Asn Asp Thr Ala Ile Trp
 555 100 105 110
 557 Glu Ala Phe Met Arg Gln Val Glu Glu Leu Val Asn Gln Gln Ile Thr
 558 115 120 125
 560 Glu Phe Ala Arg Asn Gln Ala Leu Ala Arg Leu Gln Gly Leu Gly Asp
 561 130 135 140

see 1.823 of Sequence Rules

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/665,460

DATE: 10/06/2003

TIME: 13:54:56

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Output Set: N:\CRF4\10062003\J665460.raw

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563 Ser Phe Asn Val Tyr Gln Arg Ser Leu Gln Asn Trp Leu Ala Asp Arg
564 145                               150           155           160
566 Asn Asp Thr Leu Asn Leu Ser Val Val Arg Ala Gln Phe Ile Ala Leu
567                               165           170           175
569 Asp Leu Asp Phe Val Asn Ala Ile Pro Leu Phe Ala Val Asn Gly Gln
570                               180           185           190
572 Gln Val Pro Leu Leu Ser Val Tyr Ala Gln Ala Val Asn Leu His Leu
573                               195           200           205
575 Leu Leu Leu Lys Asp Ala Ser Leu Phe Gly Glu Gly Trp Gly Phe Thr
576                               210           215           220
578 Gln Gly Glu Ile Ser Thr Tyr Tyr Asp Arg Gln Leu Glu Leu Thr Ala
579 225                               230           235           240
581 Lys Tyr Thr Asn Tyr Cys Glu Thr Trp Tyr Asn Thr Gly Leu Asp Arg
582                               245           250           255
584 Leu Arg Gly Thr Asn Thr Glu Ser Trp Leu Arg Tyr His Gln Phe Arg
585                               260           265           270
587 Arg Glu Met Thr Leu Val Val Leu Asp Val Val Ala Leu Phe Pro Tyr
588                               275           280           285
590 Tyr Asp Val Arg Leu Tyr Pro Thr Gly Ser Asn Pro Gln Leu Thr Arg
591                               290           295           300
593 Glu Val Tyr Thr Asp Pro Ile Val Phe Asn Pro Pro Ala Asn Val Gly
594 305                               310           315           320
596 Leu Cys Arg Arg Trp Gly Thr Asn Pro Tyr Asn Thr Phe Ser Glu Leu
597                               325           330           335
599 Glu Asn Ala Phe Ile Arg Pro Pro His Leu Phe Asp Arg Leu Asn Ser
600                               340           345           350
602 Leu Thr Ile Ser Ser Asn Arg Phe Pro Val Ser Ser Asn Phe Met Asp
603                               355           360           365
605 Tyr Trp Ser Gly His Thr Leu Arg Arg Ser Tyr Leu Asn Asp Ser Ala
606                               370           375           380
608 Val Gln Glu Asp Ser Tyr Gly Leu Ile Thr Thr Thr Arg Ala Thr Ile
609 385                               390           395           400
611 Asn Pro Gly Val Asp Gly Thr Asn Arg Ile Glu Ser Thr Ala Val Asp
612                               405           410           415
614 Phe Arg Ser Ala Leu Ile Gly Ile Tyr Gly Val Asn Arg Ala Ser Phe
615                               420           425           430
617 Val Pro Gly Gly Leu Phe Asn Gly Thr Thr Ser Pro Ala Asn Gly Gly
618                               435           440           445
620 Cys Arg Asp Leu Tyr Asp Thr Asn Asp Glu Leu Pro Pro Asp Glu Ser
621                               450           455           460
623 Thr Gly Ser Ser Thr His Arg Leu Ser His Val Thr Phe Phe Ser Phe
624 465                               470           475           480
626 Gln Thr Asn Gln Ala Gly Ser Ile Ala Asn Ala Gly Ser Val Pro Thr
627                               485           490           495
629 Tyr Val Trp Thr Arg Arg Asp Val Asp Leu Asn Asn Thr Ile Thr Pro
630                               500           505           510
632 Asn Arg Ile Thr Gln Leu Pro Leu Val Lys Ala Ser Ala Pro Val Ser
633                               515           520           525
635 Gly Thr Thr Val Leu Lys Gly Pro Gly Phe Thr Gly Gly Gly Ile Leu

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/665,460

DATE: 10/06/2003

TIME: 13:54:56

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Output Set: N:\CRF4\10062003\J665460.raw

```

636      530      535      540
638 Arg Arg Thr Thr Asn Gly Thr Phe Gly Thr Leu Arg Val Thr Val Asn
639 545      550      555      560
641 Ser Pro Leu Thr Gln Gln Tyr Arg Leu Arg Val Arg Phe Ala Ser Thr
642      565      570      575
644 Gly Asn Phe Ser Ile Arg Val Leu Arg Gly Gly Val Ser Ile Gly Asp
645      580      585      590
647 Val Arg Leu Gly Ser Thr Met Asn Arg Gly Gln Glu Leu Thr Tyr Glu
648      595      600      605
650 Ser Phe Phe Thr Arg Glu Phe Thr Thr Thr Gly Pro Phe Asn Pro Pro
651      610      615      620
653 Phe Thr Phe Thr Gln Ala Gln Glu Ile Leu Thr Val Asn Ala Glu Gly
654 625      630      635      640
656 Val Ser Thr Gly Gly Glu Tyr Tyr Ile Asp Arg Ile Glu Ile Val Pro
657      645      650      655
659 Val Asn Pro Ala Arg Glu Ala Glu Glu Asp Leu Glu Ala Ala Lys Lys
660      660      665      670
662 Ala

```

852 <210> SEQ ID NO: 6

853 <211> LENGTH: 673

854 <212> TYPE: PRT

855 <213> ORGANISM: Artificial sequence

W--> 856 <220> FEATURE:

856 <223> OTHER INFORMATION: Artificial sequence description: Cry9Ca1 Phe-164

857 <400> SEQUENCE: 6

```

859 Met Asn Arg Asn Asn Gln Asn Glu Tyr Glu Ile Ile Asp Ala Pro His
860 1      5      10      15
862 Cys Gly Cys Pro Ser Asp Asp Asp Val Arg Tyr Pro Leu Ala Ser Asp
863      20      25      30
865 Pro Asn Ala Ala Leu Gln Asn Met Asn Tyr Lys Asp Tyr Leu Gln Met
866      35      40      45
868 Thr Asp Glu Asp Tyr Thr Asp Ser Tyr Ile Asn Pro Ser Leu Ser Ile
869      50      55      60
871 Ser Gly Arg Asp Ala Val Gln Thr Ala Leu Thr Val Val Gly Arg Ile
872 65      70      75      80
874 Leu Gly Ala Leu Gly Val Pro Phe Ser Gly Gln Ile Val Ser Phe Tyr
875      85      90      95
877 Gln Phe Leu Leu Asn Thr Leu Trp Pro Val Asn Asp Thr Ala Ile Trp
878      100      105      110
880 Glu Ala Phe Met Arg Gln Val Glu Glu Leu Val Asn Gln Gln Ile Thr
881      115      120      125
883 Glu Phe Ala Arg Asn Gln Ala Leu Ala Arg Leu Gln Gly Leu Gly Asp
884      130      135      140
886 Ser Phe Asn Val Tyr Gln Arg Ser Leu Gln Asn Trp Leu Ala Asp Arg
887 145      150      155      160
889 Asn Asp Thr Phe Asn Leu Ser Val Val Arg Ala Gln Phe Ile Ala Leu
890      165      170      175
892 Asp Leu Asp Phe Val Asn Ala Ile Pro Leu Phe Ala Val Asn Gly Gln
893      180      185      190

```

RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

```

895 Gln Val Pro Leu Leu Ser Val Tyr Ala Gln Ala Val Asn Leu His Leu
896      195      200      205
898 Leu Leu Leu Lys Asp Ala Ser Leu Phe Gly Glu Gly Trp Gly Phe Thr
899      210      215      220
901 Gln Gly Glu Ile Ser Thr Tyr Tyr Asp Arg Gln Leu Glu Leu Thr Ala
902 225      230      235      240
904 Lys Tyr Thr Asn Tyr Cys Glu Thr Trp Tyr Asn Thr Gly Leu Asp Arg
905      245      250      255
907 Leu Arg Gly Thr Asn Thr Glu Ser Trp Leu Arg Tyr His Gln Phe Arg
908      260      265      270
910 Arg Glu Met Thr Leu Val Val Leu Asp Val Val Ala Leu Phe Pro Tyr
911      275      280      285
913 Tyr Asp Val Arg Leu Tyr Pro Thr Gly Ser Asn Pro Gln Leu Thr Arg
914      290      295      300
916 Glu Val Tyr Thr Asp Pro Ile Val Phe Asn Pro Pro Ala Asn Val Gly
917 305      310      315      320
919 Leu Cys Arg Arg Trp Gly Thr Asn Pro Tyr Asn Thr Phe Ser Glu Leu
920      325      330      335
922 Glu Asn Ala Phe Ile Arg Pro Pro His Leu Phe Asp Arg Leu Asn Ser
923      340      345      350
925 Leu Thr Ile Ser Ser Asn Arg Phe Pro Val Ser Ser Asn Phe Met Asp
926      355      360      365
928 Tyr Trp Ser Gly His Thr Leu Arg Arg Ser Tyr Leu Asn Asp Ser Ala
929      370      375      380
931 Val Gln Glu Asp Ser Tyr Gly Leu Ile Thr Thr Thr Arg Ala Thr Ile
932 385      390      395      400
934 Asn Pro Gly Val Asp Gly Thr Asn Arg Ile Glu Ser Thr Ala Val Asp
935      405      410      415
937 Phe Arg Ser Ala Leu Ile Gly Ile Tyr Gly Val Asn Arg Ala Ser Phe
938      420      425      430
940 Val Pro Gly Gly Leu Phe Asn Gly Thr Thr Ser Pro Ala Asn Gly Gly
941      435      440      445
943 Cys Arg Asp Leu Tyr Asp Thr Asn Asp Glu Leu Pro Pro Asp Glu Ser
944      450      455      460
946 Thr Gly Ser Ser Thr His Arg Leu Ser His Val Thr Phe Phe Ser Phe
947 465      470      475      480
949 Gln Thr Asn Gln Ala Gly Ser Ile Ala Asn Ala Gly Ser Val Pro Thr
950      485      490      495
952 Tyr Val Trp Thr Arg Arg Asp Val Asp Leu Asn Asn Thr Ile Thr Pro
953      500      505      510
955 Asn Arg Ile Thr Gln Leu Pro Leu Val Lys Ala Ser Ala Pro Val Ser
956      515      520      525
958 Gly Thr Thr Val Leu Lys Gly Pro Gly Phe Thr Gly Gly Gly Ile Leu
959      530      535      540
961 Arg Arg Thr Thr Asn Gly Thr Phe Gly Thr Leu Arg Val Thr Val Asn
962 545      550      555      560
964 Ser Pro Leu Thr Gln Gln Tyr Arg Leu Arg Val Arg Phe Ala Ser Thr
965      565      570      575
967 Gly Asn Phe Ser Ile Arg Val Leu Arg Gly Gly Val Ser Ile Gly Asp

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RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

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968          580          585          590
970 Val Arg Leu Gly Ser Thr Met Asn Arg Gly Gln Glu Leu Thr Tyr Glu
971          595          600          605
973 Ser Phe Phe Thr Arg Glu Phe Thr Thr Thr Gly Pro Phe Asn Pro Pro
974          610          615          620
976 Phe Thr Phe Thr Gln Ala Gln Glu Ile Leu Thr Val Asn Ala Glu Gly
977 625          630          635          640
979 Val Ser Thr Gly Gly Glu Tyr Tyr Ile Asp Arg Ile Glu Ile Val Pro
980          645          650          655
982 Val Asn Pro Ala Arg Glu Ala Glu Glu Asp Leu Glu Ala Ala Lys Lys
983          660          665          670
985 Ala
1175 <210> SEQ ID NO: 8
1176 <211> LENGTH: 673
1177 <212> TYPE: PRT
1178 <213> ORGANISM: Artificial sequence
W--> 1179 <220> FEATURE: insert
1179 <223> OTHER INFORMATION: Artificial sequence description: Cry9Cal Glu-164
<4> 1181 <400> SEQUENCE: 8
1182 Met Asn Arg Asn Asn Gln Asn Glu Tyr Glu Ile Ile Asp Ala Pro His
1183 1          5          10          15
1185 Cys Gly Cys Pro Ser Asp Asp Asp Val Arg Tyr Pro Leu Ala Ser Asp
1186          20          25          30
1188 Pro Asn Ala Ala Leu Gln Asn Met Asn Tyr Lys Asp Tyr Leu Gln Met
1189          35          40          45
1191 Thr Asp Glu Asp Tyr Thr Asp Ser Tyr Ile Asn Pro Ser Leu Ser Ile
1192          50          55          60
1194 Ser Gly Arg Asp Ala Val Gln Thr Ala Leu Thr Val Val Gly Arg Ile
1195 65          70          75          80
1197 Leu Gly Ala Leu Gly Val Pro Phe Ser Gly Gln Ile Val Ser Phe Tyr
1198          85          90          95
1200 Gln Phe Leu Leu Asn Thr Leu Trp Pro Val Asn Asp Thr Ala Ile Trp
1201          100          105          110
1203 Glu Ala Phe Met Arg Gln Val Glu Glu Leu Val Asn Gln Gln Ile Thr
1204          115          120          125
1206 Glu Phe Ala Arg Asn Gln Ala Leu Ala Arg Leu Gln Gly Leu Gly Asp
1207          130          135          140
1209 Ser Phe Asn Val Tyr Gln Arg Ser Leu Gln Asn Trp Leu Ala Asp Arg
1210 145          150          155          160
1212 Asn Asp Thr Glu Asn Leu Ser Val Val Arg Ala Gln Phe Ile Ala Leu
1213          165          170          175
1215 Asp Leu Asp Phe Val Asn Ala Ile Pro Leu Phe Ala Val Asn Gly Gln
1216          180          185          190
1218 Gln Val Pro Leu Leu Ser Val Tyr Ala Gln Ala Val Asn Leu His Leu
1219          195          200          205
1221 Leu Leu Leu Lys Asp Ala Ser Leu Phe Gly Glu Gly Trp Gly Phe Thr
1222          210          215          220
1224 Gln Gly Glu Ile Ser Thr Tyr Tyr Asp Arg Gln Leu Glu Leu Thr Ala
1225 225          230          235          240

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/665,460

DATE: 10/06/2003

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

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1227 Lys Tyr Thr Asn Tyr Cys Glu Thr Trp Tyr Asn Thr Gly Leu Asp Arg
1228                               245                               250                               255
1230 Leu Arg Gly Thr Asn Thr Glu Ser Trp Leu Arg Tyr His Gln Phe Arg
1231                               260                               265                               270
1233 Arg Glu Met Thr Leu Val Val Leu Asp Val Val Ala Leu Phe Pro Tyr
1234                               275                               280                               285
1236 Tyr Asp Val Arg Leu Tyr Pro Thr Gly Ser Asn Pro Gln Leu Thr Arg
1237                               290                               295                               300
1239 Glu Val Tyr Thr Asp Pro Ile Val Phe Asn Pro Pro Ala Asn Val Gly
1240 305                               310                               315                               320
1242 Leu Cys Arg Arg Trp Gly Thr Asn Pro Tyr Asn Thr Phe Ser Glu Leu
1243                               325                               330                               335
1245 Glu Asn Ala Phe Ile Arg Pro Pro His Leu Phe Asp Arg Leu Asn Ser
1246                               340                               345                               350
1248 Leu Thr Ile Ser Ser Asn Arg Phe Pro Val Ser Ser Asn Phe Met Asp
1249                               355                               360                               365
1251 Tyr Trp Ser Gly His Thr Leu Arg Arg Ser Tyr Leu Asn Asp Ser Ala
1252                               370                               375                               380
1254 Val Gln Glu Asp Ser Tyr Gly Leu Ile Thr Thr Thr Arg Ala Thr Ile
1255 385                               390                               395                               400
1257 Asn Pro Gly Val Asp Gly Thr Asn Arg Ile Glu Ser Thr Ala Val Asp
1258                               405                               410                               415
1260 Phe Arg Ser Ala Leu Ile Gly Ile Tyr Gly Val Asn Arg Ala Ser Phe
1261                               420                               425                               430
1263 Val Pro Gly Gly Leu Phe Asn Gly Thr Thr Ser Pro Ala Asn Gly Gly
1264                               435                               440                               445
1266 Cys Arg Asp Leu Tyr Asp Thr Asn Asp Glu Leu Pro Pro Asp Glu Ser
1267                               450                               455                               460
1269 Thr Gly Ser Ser Thr His Arg Leu Ser His Val Thr Phe Phe Ser Phe
1270 465                               470                               475                               480
1272 Gln Thr Asn Gln Ala Gly Ser Ile Ala Asn Ala Gly Ser Val Pro Thr
1273                               485                               490                               495
1275 Tyr Val Trp Thr Arg Arg Asp Val Asp Leu Asn Asn Thr Ile Thr Pro
1276                               500                               505                               510
1278 Asn Arg Ile Thr Gln Leu Pro Leu Val Lys Ala Ser Ala Pro Val Ser
1279                               515                               520                               525
1281 Gly Thr Thr Val Leu Lys Gly Pro Gly Phe Thr Gly Gly Gly Ile Leu
1282                               530                               535                               540
1284 Arg Arg Thr Thr Asn Gly Thr Phe Gly Thr Leu Arg Val Thr Val Asn
1285 545                               550                               555                               560
1287 Ser Pro Leu Thr Gln Gln Tyr Arg Leu Arg Val Arg Phe Ala Ser Thr
1288                               565                               570                               575
1290 Gly Asn Phe Ser Ile Arg Val Leu Arg Gly Gly Val Ser Ile Gly Asp
1291                               580                               585                               590
1293 Val Arg Leu Gly Ser Thr Met Asn Arg Gly Gln Glu Leu Thr Tyr Glu
1294                               595                               600                               605
1296 Ser Phe Phe Thr Arg Glu Phe Thr Thr Thr Gly Pro Phe Asn Pro Pro
1297                               610                               615                               620
1299 Phe Thr Phe Thr Gln Ala Gln Glu Ile Leu Thr Val Asn Ala Glu Gly

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RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

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Output Set: N:\CRF4\10062003\J665460.raw

1300 625 630 635 640
 1302 Val Ser Thr Gly Gly Glu Tyr Tyr Ile Asp Arg Ile Glu Ile Val Pro
 1303 645 650 655
 1305 Val Asn Pro Ala Arg Glu Ala Glu Glu Asp Leu Glu Ala Ala Lys Lys
 1306 660 665 670
 1308 Ala
 1498 <210> SEQ ID NO: 10
 1499 <211> LENGTH: 673
 1500 <212> TYPE: PRT
 1501 <213> ORGANISM: Artificial sequence
 W--> 1502 <220> FEATURE: *insert*
 1502 <223> OTHER INFORMATION: Artificial sequence description: Cry9Ca1-100%
 E/C-> 1504 <400> SEQUENCE: 10
 1505 Met Asn Arg Asn Asn Gln Asn Glu Tyr Glu Ile Ile Glu Ala Pro His
 1506 1 5 10 15
 1508 Cys Gly Cys Pro Ser Glu Glu Glu Leu Arg Tyr Pro Leu Ala Ser Glu
 1509 20 25 30
 1511 Pro Asn Ala Ala Leu Gln Asn Met Asn Tyr Lys Glu Tyr Leu Gln Met
 1512 35 40 45
 1514 Thr Glu Glu Glu Tyr Thr Glu Ser Tyr Ile Asn Pro Ser Leu Ser Ile
 1515 50 55 60
 1517 Ser Gly Arg Glu Ala Leu Gln Thr Ala Leu Thr Val Ile Arg Arg Ile
 1518 65 70 75 80
 1520 Leu Gly Ala Leu Gly Leu Pro Phe Ser Gly Gln Ile Leu Ser Phe Tyr
 1521 85 90 95
 1523 Gln Phe Leu Leu Asn Thr Leu Phe Pro Leu Asn Glu Thr Ala Ile Phe
 1524 100 105 110
 1526 Glu Ala Phe Met Arg Gln Leu Glu Glu Leu Leu Asn Gln Gln Ile Thr
 1527 115 120 125
 1529 Glu Phe Ala Arg Asn Gln Ala Leu Ala Arg Leu Gln Gly Leu Gly Glu
 1530 130 135 140
 1532 Ser Phe Asn Leu Tyr Gln Arg Ser Leu Gln Asn Phe Leu Ala Glu Arg
 1533 145 150 155 160
 1535 Asn Glu Thr Arg Asn Leu Ser Leu Leu Arg Ala Gln Phe Ile Ala Leu
 1536 165 170 175
 1538 Glu Leu Glu Phe Leu Asn Ala Ile Pro Leu Phe Ala Leu Asn Gly Gln
 1539 180 185 190
 1541 Gln Leu Pro Leu Leu Ser Leu Tyr Ala Gln Ala Leu Asn Leu His Leu
 1542 195 200 205
 1544 Leu Leu Leu Lys Glu Ala Ser Leu Phe Gly Glu Gly Phe Gly Phe Thr
 1545 210 215 220
 1547 Gln Gly Glu Ile Ser Thr Tyr Tyr Glu Arg Gln Leu Glu Leu Thr Ala
 1548 225 230 235 240
 1550 Lys Tyr Thr Asn Tyr Cys Glu Thr Phe Tyr Asn Thr Gly Leu Glu Arg
 1551 245 250 255
 1553 Leu Arg Gly Thr Asn Thr Glu Ser Phe Leu Arg Tyr His Gln Phe Arg
 1554 260 265 270
 1556 Arg Glu Met Thr Leu Leu Leu Leu Glu Leu Leu Ala Leu Phe Pro Tyr
 1557 275 280 285

RAW SEQUENCE LISTING

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1559 Tyr Glu Leu Arg Leu Tyr Pro Thr Gly Ser Asn Pro Gln Leu Thr Arg
1560      290      295      300
1562 Glu Leu Tyr Thr Glu Pro Ile Leu Phe Asn Pro Pro Ala Asn Leu Gly
1563 305      310      315      320
1565 Leu Cys Arg Arg Phe Gly Thr Asn Pro Tyr Asn Thr Phe Ser Glu Leu
1566      325      330      335
1568 Glu Asn Ala Phe Ile Arg Pro Pro His Leu Phe Glu Arg Leu Asn Ser
1569      340      345      350
1571 Leu Thr Ile Ser Ser Asn Arg Phe Pro Leu Ser Ser Asn Phe Met Glu
1572      355      360      365
1574 Tyr Phe Ser Gly His Thr Leu Arg Arg Ser Tyr Leu Asn Glu Ser Ala
1575      370      375      380
1577 Leu Gln Glu Glu Ser Tyr Gly Leu Ile Thr Thr Thr Arg Ala Thr Ile
1578 385      390      395      400
1580 Asn Pro Gly Leu Glu Gly Thr Asn Arg Ile Glu Ser Thr Ala Leu Glu
1581      405      410      415
1583 Phe Arg Ser Ala Leu Ile Gly Ile Tyr Gly Leu Asn Arg Ala Ser Phe
1584      420      425      430
1586 Leu Pro Gly Gly Leu Phe Asn Gly Thr Thr Ser Pro Ala Asn Gly Gly
1587      435      440      445
1589 Cys Arg Glu Leu Tyr Glu Thr Asn Glu Glu Leu Pro Pro Glu Glu Ser
1590      450      455      460
1592 Thr Gly Ser Ser Thr His Arg Leu Ser His Leu Thr Phe Phe Ser Phe
1593 465      470      475      480
1595 Gln Thr Asn Gln Ala Gly Ser Ile Ala Asn Ala Gly Ser Leu Pro Thr
1596      485      490      495
1598 Tyr Leu Phe Thr Arg Arg Glu Leu Glu Leu Asn Asn Thr Ile Thr Pro
1599      500      505      510
1601 Asn Arg Ile Thr Gln Leu Pro Leu Leu Lys Ala Ser Ala Pro Leu Ser
1602      515      520      525
1604 Gly Thr Thr Leu Leu Lys Gly Pro Gly Phe Thr Gly Gly Gly Ile Leu
1605      530      535      540
1607 Arg Arg Thr Thr Asn Gly Thr Phe Gly Thr Leu Arg Leu Thr Leu Asn
1608 545      550      555      560
1610 Ser Pro Leu Thr Gln Gln Tyr Arg Leu Arg Leu Arg Phe Ala Ser Thr
1611      565      570      575
1613 Gly Asn Phe Ser Ile Arg Leu Leu Arg Gly Gly Leu Ser Ile Gly Glu
1614      580      585      590
1616 Leu Arg Leu Gly Ser Thr Met Asn Arg Gly Gln Glu Leu Thr Tyr Glu
1617      595      600      605
1619 Ser Phe Phe Thr Arg Glu Phe Thr Thr Thr Gly Pro Phe Asn Pro Pro
1620      610      615      620
1622 Phe Thr Phe Thr Gln Ala Gln Glu Ile Leu Thr Leu Asn Ala Glu Gly
1623 625      630      635      640
1625 Leu Ser Thr Gly Gly Glu Tyr Tyr Ile Glu Arg Ile Glu Ile Leu Pro
1626      645      650      655
1628 Leu Asn Pro Ala Arg Glu Ala Glu Glu Glu Leu Glu Ala Ala Lys Lys
1629      660      665      670
1631 Ala

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RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

1821 <210> SEQ ID NO: 12
 1822 <211> LENGTH: 673
 1823 <212> TYPE: PRT
 1824 <213> ORGANISM: Artificial sequence
 W--> 1825 <220> FEATURE: *insert*
 1825 <223> OTHER INFORMATION: Artificial sequence description: Cry9Ca1-25%
 E4-OK 1827 <400> SEQUENCE: 12

1828	Met	Asn	Arg	Asn	Asn	Gln	Asn	Glu	Tyr	Glu	Ile	Ile	Asp	Ala	Pro	His
1829	1			5				10						15		
1831	Cys	Gly	Cys	Pro	Ser	Asp	Asp	Asp	Val	Arg	Tyr	Pro	Leu	Ala	Ser	Asp
1832				20				25					30			
1834	Pro	Asn	Ala	Ala	Leu	Gln	Asn	Met	Asn	Tyr	Lys	Asp	Tyr	Leu	Gln	Met
1835			35					40					45			
1837	Thr	Asp	Glu	Asp	Tyr	Thr	Asp	Ser	Tyr	Ile	Asn	Pro	Ser	Leu	Ser	Ile
1838		50					55				60					
1840	Ser	Gly	Arg	Glu	Ala	Leu	Gln	Thr	Ala	Leu	Thr	Leu	Leu	Gly	Arg	Ile
1841	65					70				75				80		
1843	Leu	Gly	Ala	Leu	Gly	Val	Pro	Phe	Ser	Gly	Gln	Ile	Leu	Ser	Phe	Tyr
1844				85					90					95		
1846	Gln	Phe	Leu	Leu	Asn	Thr	Leu	Trp	Pro	Val	Asn	Asp	Thr	Ala	Ile	Trp
1847			100					105					110			
1849	Glu	Ala	Phe	Met	Arg	Gln	Val	Glu	Glu	Leu	Val	Asn	Gln	Gln	Ile	Thr
1850			115					120					125			
1852	Glu	Phe	Ala	Arg	Asn	Gln	Ala	Leu	Ala	Arg	Leu	Gln	Gly	Leu	Gly	Glu
1853		130				135					140					
1855	Ser	Phe	Asn	Val	Tyr	Gln	Arg	Ser	Leu	Gln	Asn	Trp	Leu	Ala	Asp	Arg
1856	145				150					155				160		
1858	Asn	Asp	Thr	Arg	Asn	Leu	Ser	Leu	Leu	Arg	Ala	Gln	Phe	Ile	Ala	Leu
1859				165					170					175		
1861	Asp	Leu	Asp	Phe	Val	Asn	Ala	Ile	Pro	Leu	Phe	Ala	Val	Asn	Gly	Gln
1862				180					185					190		
1864	Gln	Val	Pro	Leu	Leu	Ser	Val	Tyr	Ala	Gln	Ala	Leu	Asn	Leu	His	Leu
1865			195					200					205			
1867	Leu	Leu	Leu	Lys	Glu	Ala	Ser	Leu	Phe	Gly	Glu	Gly	Trp	Gly	Phe	Thr
1868		210					215						220			
1870	Gln	Gly	Glu	Ile	Ser	Thr	Tyr	Tyr	Glu	Arg	Gln	Leu	Glu	Leu	Thr	Ala
1871	225					230				235				240		
1873	Lys	Tyr	Thr	Asn	Tyr	Cys	Glu	Thr	Trp	Tyr	Asn	Thr	Gly	Leu	Glu	Arg
1874				245						250				255		
1876	Leu	Arg	Gly	Thr	Asn	Thr	Glu	Ser	Phe	Leu	Arg	Tyr	His	Gln	Phe	Arg
1877			260						265					270		
1879	Arg	Glu	Met	Thr	Leu	Val	Val	Leu	Asp	Val	Val	Ala	Leu	Phe	Pro	Tyr
1880			275					280					285			
1882	Tyr	Asp	Val	Arg	Leu	Tyr	Pro	Thr	Gly	Ser	Asn	Pro	Gln	Leu	Thr	Arg
1883		290					295					300				
1885	Glu	Val	Tyr	Thr	Asp	Pro	Ile	Val	Phe	Asn	Pro	Pro	Ala	Asn	Leu	Gly
1886	305					310					315			320		
1888	Leu	Cys	Arg	Arg	Trp	Gly	Thr	Asn	Pro	Tyr	Asn	Thr	Phe	Ser	Glu	Leu
1889				325					330					335		

RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

```

1891 Glu Asn Ala Phe Ile Arg Pro Pro His Leu Phe Glu Arg Leu Asn Ser
1892          340          345          350
1894 Leu Thr Ile Ser Ser Asn Arg Phe Pro Val Ser Ser Asn Phe Met Glu
1895          355          360          365
1897 Tyr Phe Ser Gly His Thr Leu Arg Arg Ser Tyr Leu Asn Asp Ser Ala
1898          370          375          380
1900 Val Gln Glu Asp Ser Tyr Gly Leu Ile Thr Thr Thr Arg Ala Thr Ile
1901 385          390          395          400
1903 Asn Pro Gly Val Asp Gly Thr Asn Arg Ile Glu Ser Thr Ala Val Asp
1904          405          410          415
1906 Phe Arg Ser Ala Leu Ile Gly Ile Tyr Gly Val Asn Arg Ala Ser Phe
1907          420          425          430
1909 Val Pro Gly Gly Leu Phe Asn Gly Thr Thr Ser Pro Ala Asn Gly Gly
1910          435          440          445
1912 Cys Arg Asp Leu Tyr Asp Thr Asn Asp Glu Leu Pro Pro Asp Glu Ser
1913          450          455          460
1915 Thr Gly Ser Ser Thr His Arg Leu Ser His Leu Thr Phe Phe Ser Phe
1916 465          470          475          480
1918 Gln Thr Asn Gln Ala Gly Ser Ile Ala Asn Ala Gly Ser Val Pro Thr
1919          485          490          495
1921 Tyr Val Trp Thr Arg Arg Asp Val Asp Leu Asn Asn Thr Ile Thr Pro
1922          500          505          510
1924 Asn Arg Ile Thr Gln Leu Pro Leu Val Lys Ala Ser Ala Pro Val Ser
1925          515          520          525
1927 Gly Thr Thr Val Leu Lys Gly Pro Gly Phe Thr Gly Gly Gly Ile Leu
1928          530          535          540
1930 Arg Arg Thr Thr Asn Gly Thr Phe Gly Thr Leu Arg Val Thr Val Asn
1931 545          550          555          560
1933 Ser Pro Leu Thr Gln Gln Tyr Arg Leu Arg Leu Arg Phe Ala Ser Thr
1934          565          570          575
1936 Gly Asn Phe Ser Ile Arg Val Leu Arg Gly Gly Val Ser Ile Gly Asp
1937          580          585          590
1939 Val Arg Leu Gly Ser Thr Met Asn Arg Gly Gln Glu Leu Thr Tyr Glu
1940          595          600          605
1942 Ser Phe Phe Thr Arg Glu Phe Thr Thr Thr Gly Pro Phe Asn Pro Pro
1943          610          615          620
1945 Phe Thr Phe Thr Gln Ala Gln Glu Ile Leu Thr Val Asn Ala Glu Gly
1946 625          630          635          640
1948 Val Ser Thr Gly Gly Glu Tyr Tyr Ile Asp Arg Ile Glu Ile Val Pro
1949          645          650          655
1951 Val Asn Pro Ala Arg Glu Ala Glu Glu Asp Leu Glu Ala Ala Lys Lys
1952          660          665          670
1954 Ala

```

3841 <210> SEQ ID NO: 160

3842 <211> LENGTH: 30

3843 <212> TYPE: DNA

3844 <213> ORGANISM: Artificial sequence

3846 <220> FEATURE:

3847 <223> OTHER INFORMATION: Artificial sequence description:

RAW SEQUENCE LISTING

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:56

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

3848 oligonucleotide 119

3850 <400> SEQUENCE: 160

3851 cgagaagcgg aagaggaatt agaagcggcg

30

E--> 3852 1

Delete

VERIFICATION SUMMARY

DATE: 10/06/2003

PATENT APPLICATION: US/10/665,460

TIME: 13:54:57

Input Set : A:\#458171 v1 - A35992-PCT-USA-A Sequence Listing.txt

Output Set: N:\CRF4\10062003\J665460.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:16 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:19 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD
L:533 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4
L:535 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:4
L:856 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6
L:858 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:6
L:1179 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8
L:1181 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:8
L:1502 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:1504 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:10
L:1825 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:12
L:1827 M:200 E: Mandatory Header Field missing, <220> Tag not found for SEQ ID#:12
L:3852 M:254 E: No. of Bases conflict, this line has no nucleotides.